AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A method of manufacturing potassium niobate single crystal thin film, comprising ~~the steps of~~:

preparing a liquid drop emission apparatus including an emission head which moves relative to a substrate and which emits liquid drops of a potassium niobate solution;

operating the liquid drop emission apparatus so as to coat the substrate with the ~~coating~~ liquid drops of ~~a~~ the potassium niobate solution ~~on a substrate~~; and

precipitating orthorhombic potassium niobate single crystal from the liquid drops, wherein

the coating with the liquid drops and the precipitating of the orthorhombic potassium niobate single crystal are carried out repeatedly, and the coating with the liquid drops is carried out so that the liquid drops are applied in a subsequent step and are overlapped with at least a part of the orthorhombic potassium niobate single crystal precipitated in a previous precipitating.

2. (Currently Amended) The method as defined in Claim 1, wherein the ~~step of~~ coating with the liquid drops is carried out by a liquid drop emission method.

3. (Currently Amended) The method as defined in ~~Claim 2~~Claim 1, wherein a volume of the liquid drop is less than 100 picoliters.

4. (Cancelled)

5. (Original) The method as defined in Claim 1, wherein the potassium niobate solution is a potassium niobate fluoride aqueous solution.

6. (Original) The method as defined in Claim 1, wherein the substrate has a crystallographic axis on a surface thereof that is oriented in a direction perpendicular and in-plane to the surface, and the potassium niobate single crystal is epitaxially grown on the substrate.

7. (Original) The method as defined in Claim 6, wherein the substrate is a strontium titanate (100) single crystal substrate.

8. (Original) The method as defined in Claim 6, wherein the substrate comprises a silicon single crystal substrate and a buffer layer epitaxially grown thereon.

9. (Original) The method as defined in Claim 8, wherein the buffer layer includes a first buffer layer having a NaCl-type oxide and a second buffer layer having a simple perovskite-type oxide epitaxially grown thereon.

10. (Original) The method as defined in Claim 8, wherein the buffer layer includes a fluorite-type oxide first buffer layer, and a second buffer layer that contains a layered perovskite-type oxide epitaxially grown on the first buffer and a simple perovskite-type oxide epitaxially grown on the perovskite-type oxide.

11. (Currently Amended) The method as defined in Claim 6, wherein the substrate includes one of a crystal, quartz, ~~SiO_2-covered~~ SiO_2-covered silicon, and diamond-covered silicon, and a buffer layer formed thereon, and wherein the buffer layer includes a first buffer layer grown on the substrate in in-plane orientation independently of crystal orientation of a surface of the substrate and a second buffer layer having oxide epitaxially grown thereon, the first and second buffer layers being manufactured by a vapor deposition method accompanying ion beam irradiation.

12. (Original) The method as defined in Claim 11, wherein the first buffer layer is manufactured by a NaCl–type oxide, and the second buffer layer is manufactured by a simple perovskite-type oxide.

13. (Original) The method as defined in Claim 11, wherein the first buffer layer is manufactured by a fluorite-type oxide, and wherein the second buffer layer is manufactured by a layered perovskite-type oxide and a simple perovskite-type oxide grown epitaxially thereon.

14-18 (Cancelled).